Annexure 1 - Claims Rewritten to Show Amendments

Please amend the claims to read as follows:

1. (Currently Amended) A method of measuring upper airway resistance of a human patient, the method comprising the steps of:

obtaining air pressure data from an air pressure data signal corresponding to a plurality of breathing cycles while the human patient is asleep;

obtaining air flow data from an air flow data signal corresponding to the plurality of breathing cycles while the human patient is asleep;

transferring the air pressure data and the air flow data to a processor;

storing the air pressure data and the air flow data in respective correlated storage regions of a matrix program system of the processor;

segregating the air pressure data and the air flow data in the matrix program of the processor into corresponding breathing cycles of the human patient;

computing normalized air pressure data to achieve a predetermined normalized air pressure value to correspond with a predetermined point for each breathing cycle of the human patient;

producing a correlation of the air flow data against normalized air pressure data;

curve-fitting onto the correlation of the air flow data against normalized air pressure data a curve corresponding to a predetermined multiple term mathematical function, the predetermined multiple term mathematical function is a ~~quadratic function, $F(P) = AP^2 + BP + C$~~ <u>three term polynomial function $F(P) = AP^3 + BP^2 + CP + D$</u>, where *A*, *B*, and *C* are coefficients<u>, and *D* is a constant</u>;

computing the value of the coefficients of the predetermined multiple term mathematical function;

computing the derivative of the predetermined multiple term mathematical function; and

computing a resistance corresponding to the reciprocal of coefficient C, whereby

Resistance = $1/C$.

2. (Canceled)

3. (Canceled)

4. (Previously Presented) The method of claim 1, wherein said step of computing the derivative of the predetermined multiple term mathematical function corresponds to the relationship:

$$\frac{dF}{dP} = 3AP^2 + 2BP + C$$

5. (Previously Presented) The method of claim 4, wherein there is provided the step of determining that a breath corresponds to snoring in response to the derivative of the three term polynomial function having a value of zero or positive, whereby

$$\frac{dF}{dP} \geq 0 \longrightarrow IFL$$

6. (Previously Presented) The method of claim 4, wherein there is provided the step of determining that a breath does not correspond to snoring in response to the derivative of the three term polynomial function having a negative value, whereby

$$\frac{dF}{dP} < 0 \longrightarrow NIFL$$

7. (Canceled)

8. (Previously Presented) A method of determining a flow-limiting characteristic of the upper airway of a human patient, the method comprising the steps of:

obtaining air pressure data from an air pressure data signal corresponding to a plurality of breathing cycles while the human patient is asleep;

obtaining air flow data from an air flow data signal corresponding to the plurality of breathing cycles while the human patient is asleep;

transferring the air pressure data and the air flow data to a processor;

storing the air pressure data and the air flow data in respective correlated storage regions of a matrix program system of the processor;

segregating the air pressure data and the air flow data in the matrix program of the processor into corresponding breathing cycles of the human patient;

computing normalized air pressure data to achieve a predetermined normalized air pressure value to correspond with a predetermined point for each breathing cycle of the human patient; and

computing the flow-limiting characteristic of the upper airway of a human patient as a function of normalized air pressure data divided by corresponding air flow data;

wherein each breathing cycle of the human patient is determined in relation to the predetermined point thereof corresponding to the predetermined normalized air pressure value.

9. (Original) The method of claim 8, wherein the matrix program system is a spreadsheet program system, the air pressure data and the air flow data being arranged in respective spreadsheet columns correlated by rows.

10. (Original) The method of claim 9, wherein said step of computing normalized air pressure data comprises the further step of storing the normalized air pressure data in a respective spreadsheet column correlated by rows into corresponding breathing cycles of the human patient.

11. (Canceled)

12. (Previously Presented) The method of claim 8, wherein there is further provided the step of computing the flow-limiting characteristic of the upper airway of a human patient for each of the plurality of breathing cycles.

13. (Previously Presented) The method of claim 8, wherein the predetermined normalized air pressure value corresponds to a zero value.

14. (Original) The method of claim 13, wherein each breathing cycle of the human patient is further determined in relation to the predetermined point thereof corresponding to the air flow data having a zero value.

15. (Original) The method of claim 8, wherein the air pressure data and the air flow data are sampled a plurality of times during each breathing cycle.

16. (Original) The method of claim 15, wherein said step of computing the flow-limiting characteristic of the upper airway of a human patient is performed a corresponding plurality of times during each breathing cycle.

17. (Original) The method of claim 16, wherein said step of computing the flow-limiting characteristic of the upper airway of a human patient is performed a corresponding plurality of times during each breathing cycle and during which the air flow data has a predetermined value.

18. (Original) The method of claim 17, wherein there is further provided the step of correlating the air flow data and the normalized pressure data to form a data correlation in a data correlation array, and the predetermined value of the air flow data is determined within a substantially linear portion of the data correlation.

19. (Original) The method of claim 18, wherein the predetermined value of the air flow data is approximately between 0.00 L/s and 0.22 L/s.

20. (Original) The method of claim 18, wherein the predetermined value of the air flow data is approximately 0.20 L/s.

21. (Original) The method of claim 18, wherein there is provided the further step of computing a slope of the correlated air flow data and normalized pressure data within the substantially linear portion of the data correlation.

22. (Original) The method of claim 17, wherein there is provided the further step of producing a data array corresponding to the flow-limiting characteristic wherein the normalized air pressure data corresponds to the x-axis and the air flow data corresponds to the y-axis.

23. (Original) A method of measuring upper airway resistance of a human patient, the method comprising the steps of:

obtaining air pressure data from an air pressure data signal corresponding to a plurality of breathing cycles while the human patient is asleep;

obtaining air flow data from an air flow data signal corresponding to the plurality of breathing cycles while the human patient is asleep;

transferring the air pressure data and the air flow data to a processor;

storing the air pressure data and the air flow data in respective correlated storage regions of a matrix program system of the processor;

segregating the air pressure data and the air flow data in the matrix program of the processor into corresponding breathing cycles of the human patient;

computing normalized air pressure data to achieve a predetermined normalized air pressure value to correspond with a predetermined point for each breathing cycle of the human patient;

producing a correlation of the air flow data against normalized air pressure data;

curve-fitting onto the correlation of the air flow data against normalized air pressure data a curve corresponding to a three term polynomial function $F(P) = AP^3 + BP^2 + CP + D$, where *A*, *B*, *C*, and *D* are coefficients; and

computing the value of the upper airway resistance of a human patient as an inverse function of coefficient C of the three term mathematical function, C, whereby

$$\text{Resistance} = 1/C.$$

24. (Original) The method of claim 23, wherein each breathing cycle is defined at an onset point where inspiratory flow is zero.

25. (Original) The method of claim 23, wherein each breathing cycle is defined at an onset point where supraglottic pressure has been normalized to zero.

26. (Original) The method of claim 23, wherein there is further provided the step of computing the derivative of the three term polynomial function in accordance with the relationship:

$$\frac{dF}{dP} = 3AP^2 + 2BP + C$$

27. (Original) The method of claim 26, wherein there is further provided the step of determining the presence of inspiratory flow limitation in response to the derivative of the three term polynomial function.

28. (Original) The method of claim 23, wherein said step of obtaining air flow data from an air flow data signal comprises the further step of recording the air flow data signal on a polygraph.

29. (Original) The method of claim 28, wherein said step of storing the air pressure data and the air flow data in respective correlated storage regions of a matrix program system of the processor comprises the step of exporting the air pressure data and the air flow data to a first Excel® spreadsheet.

30. (Original) The method of claim 29, wherein there is further provided the step of plotting a graphical representation of adjusted time along the x-axis and flow along the y-axis.

31. (Original) The method of claim 30, wherein there is further provided the step of curve fitting an inspiratory rising limb flow-time curve to a mathematical polynomial function $F(P)= A\,t^3 + B\,Ht^2 + Ct + D$. where *A, B, C,* and *D* are coefficients.

32. (Original) The method of claim 31, wherein there is further provided the step of calculating a derivative of the mathematical polynomial function.

33. (Original) The method of claim 32, wherein there is further provided the step of exporting the value of the derivative of the mathematical polynomial function to a second Excel® spreadsheet.

34. (Original) The method of claim 33, wherein there is further provided the step of determining whether a breath is or is not flow limited, in response to the value of the derivative of the mathematical polynomial function.